

43. An isolated DNA molecule capable of hybridizing with the complement of the cDNA described in SEQ ID NO: 2 under stringent condition.
44. An isolated DNA molecule of claim 43 encoding a protein molecule, the function of which is to protect cells against degeneration and/or cell death.
45. An isolated nucleic acid molecule of claim 40 encoding a protein molecule, the function of which is to protect cells of the nerve system, muscular system, prostate, stomach, testis, ovary, adrenal glands, mammary glands, liver, spleen, lung, trachea or placenta against degeneration and/or cell death.
46. A vector comprising a nucleic acid molecule according to claim 39.
47. A vector according to claim 46 wherein said vector is a plasmid, a virus or a bacteriophage.
48. A plasmid according to claim 47 wherein said plasmid is adapted for expression in a yeast cell and further comprises the regulatory elements necessary for expression of said nucleic acid molecule.
49. A plasmid according to claim 47 wherein said plasmid is adapted for expression in a bacterial cell and further comprises the regulatory elements necessary for expression of said nucleic acid molecule.
50. A plasmid according to claim 46 wherein said plasmid is adapted for expression in a mammalian cell and further comprises the regulatory elements necessary for expression of said nucleic acid molecule.
51. A cell transformed with a nucleic acid molecule according to claim 39, wherein said cell is in particular a bacterial cell, a yeast cell, a mammalian cell, or an insect cell.
52. A protein molecule shown in SEQ ID NO:1.

53. A protein molecule, the function of which is to protect cells against degeneration and/or cell death, wherein the amino acid sequence of the protein molecule comprises the sequence shown in SEQ ID NO:1 or a functional variant thereof.
54. A protein molecule of claim 52, the function of which is to protect cells of the nerve system, muscular system, prostate, stomach, testis, ovary, adrenal glands, mammary glands, liver, spleen, against degeneration and/or cell death.
55. An antibody specifically immunoreactive with an immunogen, wherein said immunogen is a protein molecule shown in SEQ ID NO: 1.
56. An antibody specifically immunoreactive with a protein molecule, the function of which is to protect cells against degeneration and/or cell death, wherein the amino acid sequence of the protein molecule comprises the sequence shown in SEQ ID NO: 1 or a functional variant thereof.
57. A method of detecting pathological cells in a subject which comprises immunocytochemically staining cells with an antibody of claim 55, wherein a low degree of staining in said cell compared to a cell representing a known health status indicates a pathological change of said cells.
58. A method of claim 57, wherein cells of the nerve system, muscular system, prostate, stomach, testis, ovary, adrenal glands, mammary glands, liver, spleen, lung, trachea or placenta are used.
59. A method of diagnosing or prognosing a disease, in particular a neurological disease, in a subject comprising:

- a) determining a level, or an activity, or both said level and said activity, of at least one substance which is selected from the group consisting of
- i) a DNA molecule encoding a protein molecule, wherein the amino acid sequence of the protein molecule comprises the sequence shown in SEQ ID NO:1 or a functional variant thereof,
 - ii) a transcription product of a DNA molecule encoding a protein molecule, wherein the amino acid sequence of the protein molecule comprises the sequence shown in SEQ ID NO:1 or a functional variant thereof,
 - iii) a protein molecule wherein the amino acid sequence of the protein molecule comprises the sequence shown in SEQ ID NO:1 or a functional variant thereof,
 - iv) a DNA molecule capable of hybridizing with the complement of the DNA described in SEQ ID NO: 2 under stringent conditions,
 - v) a transcription product of a DNA molecule capable of hybridizing with the complement of the DNA described in SEQ ID NO: 2 under stringent conditions,
 - vi) a translation product of a DNA molecule capable of hybridizing with the complement of the DNA described in SEQ ID NO: 2 under stringent conditions,
 - vii) a molecule affecting a level, or an activity, or both said level and said activity, of at least one substance which is selected from the group consisting of (a) to (f),

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- viii) a molecule which is affected in its level, or its activity, or both its level and activity, by at least one substance which is selected from the group consisting of (a) to (f), and
- b) comparing said level, or said activity, or both said level and said activity, of at least one of said substances (a) to (h) to a reference value representing a known disease or health status, thereby diagnosing or prognosing a disease, in particular a neurological disease, in said subject.
60. A method of monitoring the progression of a disease, in particular a neurological disease, in a subject, comprising:
- a) determining a level, or an activity, or both said level and said activity, of at least one substance which is selected from the group consisting of
- i) a DNA molecule encoding a protein molecule, wherein the amino acid sequence of the protein molecule comprises the sequence shown in SEQ ID NO:1 or a functional variant thereof,
- ii) a transcription product of a DNA molecule encoding a protein molecule, wherein the amino acid sequence of the protein molecule comprises the sequence shown in SEQ ID NO:1 or a functional variant thereof,
- iii) a protein molecule, wherein the amino acid sequence of the protein molecule comprises the sequence shown in SEQ ID NO:1 or a functional variant thereof,
- iv) a DNA molecule capable of hybridizing with the complement of the DNA described in SEQ ID NO: 2 under stringent conditions,

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- v) a transcription product of a DNA molecule capable of hybridizing with the complement of the DNA described in SEQ ID NO: 2 under stringent conditions,
 - vi) a translation product of a DNA molecule capable of hybridizing with the complement of the DNA described in SEQ ID NO: 2 under stringent conditions,
 - vii) a molecule affecting a level, or an activity, or both said level and said activity, of at least one substance which is selected from the group consisting of (a) to (f),
 - viii) a molecule which is affected in its level, or its activity, or both its level and activity, by at least one substance which is selected from the group consisting of (a) to (f), and
- b) comparing said level, or said activity, or both said level and said activity, of at least one of said substances (a) to (h) to a reference value representing a known disease or health status, thereby monitoring progression of a disease, in particular a neurological disease, in said subject.
61. A method of evaluating a treatment for a disease, in particular a neurological disease, in a subject, said method comprising:
- a) determining a level, or an activity, or both said level and said activity, of at least one substance which is selected from the group consisting of

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- i) a DNA molecule encoding a protein molecule, wherein the amino acid sequence of the protein molecule comprises the sequence shown in SEQ ID NO:1 or a functional variant thereof,
 - ii) a transcription product of a DNA molecule encoding a protein molecule, wherein the amino acid sequence of the protein molecule comprises the sequence shown in SEQ ID NO:1 or a functional variant thereof,
 - iii) a protein molecule, wherein the amino acid sequence of the protein molecule comprises the sequence shown in SEQ ID NO:1 or a functional variant thereof,
 - iv) a DNA molecule capable of hybridizing with the complement of the DNA described in SEQ ID NO: 2 under stringent conditions,
 - v) a transcription product of a DNA molecule capable of hybridizing with the complement of the DNA described in SEQ ID NO: 2 under stringent conditions,
 - vi) a translation product of a DNA molecule capable of hybridizing with the complement of the DNA described in SEQ ID NO: 2 under stringent conditions,
 - vii) a molecule affecting a level, or an activity, or both said level and said activity, of at least one substance which is selected from the group consisting of (a) to (f),

- viii) a molecule which is affected in its level, or its activity, or both its level and activity, by at least one substance which is selected from the group consisting of (a) to (f), and
- b) comparing said level, or said activity, or both said level and said activity, of at least one of said substances (a) to (h) to a reference value representing a known disease or health status, thereby monitoring progression of a disease, in particular a neurological disease, in said subject.
62. The method according to claim 59, wherein the function of said protein molecule or a variant thereof is to protect cells from degeneration and/or cell death.
63. The method according to claim 59, wherein a decrease of a level or an activity of (i) a transcription product of a DNA molecule encoding a protein molecule, the amino acid sequence of which comprises the sequence shown in SEQ ID NO:1 or a functional variant thereof or (ii) a protein molecule, the amino acid sequence of which comprises the sequence shown in SEQ ID NO:1 or a functional variant thereof, in a sample from said subject relative to a reference value representing a known health status indicates the presence of a disease, in particular a neurological disease, in said subject.
64. The method according to claim 59, wherein said DNA molecule capable of hybridizing with the complement of the DNA described in SEQ ID NO: 2 encodes a protein molecule, the function of which is to protect cells against degeneration and/or cell death.
65. The method according to claim 59, wherein said subject suffers from Alzheimer's disease or related neurofibrillary disorders, or neurodegenerative states characterized by cell

degeneration or cell death, or Parkinson's disease, or Huntington disease, or Amyotrophic lateralsclerosis or Pick's disease.

66. An agent which affects an activity, or level, or both said activity and level, of at least one substance which is selected from the group consisting of
- a) a DNA molecule encoding a protein molecule, wherein the amino acid sequence of the protein molecule comprises the sequence shown in SEQ ID NO:1 or a functional variant thereof,
 - b) a transcription product of a DNA molecule encoding a protein molecule, wherein the amino acid sequence of the protein molecule comprises the sequence shown in SEQ ID NO:1 or a functional variant thereof,
 - c) a protein molecule, wherein the amino acid sequence of the protein molecule comprises the sequence shown in SEQ ID NO:1 or a functional variant thereof,
 - d) a DNA molecule capable of hybridizing with the complement of the DNA described in SEQ ID NO: 2 under stringent conditions,
 - e) a transcription product of a DNA molecule capable of hybridizing with the complement of the DNA described in SEQ ID NO: 2 under stringent conditions,
 - f) a translation product of a DNA molecule capable of hybridizing with the complement of the DNA described in SEQ ID NO: 2 under stringent conditions,
 - g) a molecule affecting a level, or an activity, or both said level and said activity, of at least one substance which is selected from the group consisting of (a) to (f),
 - h) a molecule which is affected in its level, or its activity, or both its level and activity, by at least one substance which is selected from the group consisting of (a) to (f), and

- i) comparing said level, or said activity, or both said level and said activity, of at least one of said substances (a) to (h) to a reference value representing a known disease or health status, thereby monitoring progression of a disease, in particular a neurological disease, in said subject.

67. An agent of claim 66, wherein the function of said protein molecule or a variant thereof is to protect cells from degeneration and/or cell death.
68. An agent of claim 66 wherein said DNA molecule capable of hybridizing with the complement of the DNA described in SEQ ID NO: 2 encodes a protein molecule, the function of which is to protect cells against degeneration and/or cell death.
69. A medicament comprising an agent according to claim 66.
70. Use of an agent for preparation of a medicament for treating or preventing a neurological disease, in particular Alzheimer's disease, which agent affects an activity, or level, or both said activity and level, of at least one substance which is selected from the group consisting of
- a) a DNA molecule encoding a protein molecule, wherein the amino acid sequence of the protein molecule comprises the sequence shown in SEQ ID NO:1 or a functional variant thereof,
 - b) a transcription product of a DNA molecule encoding a protein molecule, wherein the amino acid sequence of the protein molecule comprises the sequence shown in SEQ ID NO:1 or a functional variant thereof,
 - c) a protein molecule, wherein the amino acid sequence of the protein molecule comprises the sequence shown in SEQ ID NO:1 or a functional variant thereof,

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FOOTNOTES
- d) a DNA molecule capable of hybridizing with the complement of the DNA described in SEQ ID NO: 2 under stringent conditions,
 - e) a transcription product of a DNA molecule capable of hybridizing with the complement of the DNA described in SEQ ID NO: 2 under stringent conditions,
 - f) a translation product of a DNA molecule capable of hybridizing with the complement of the DNA described in SEQ ID NO: 2 under stringent conditions,
 - g) a molecule affecting a level, or an activity, or both said level and said activity, of at least one substance which is selected from the group consisting of (a) to (f),
 - h) a molecule which is affected in its level, or its activity, or both its level and activity, by at least one substance which is selected from the group consisting of (a) to (f), and
 - i) comparing said level, or said activity, or both said level and said activity, of at least one of said substances (a) to (h) to a reference value representing a known disease or health status, thereby monitoring progression of a disease, in particular a neurological disease, in said subject.

- 71. Use of an agent according to claim 70, wherein the function of said protein molecule or a variant thereof is to protect cells from degeneration and/or cell death.
- 72. Use of an agent according to claim 70, wherein said DNA molecule capable of hybridizing with the complement of the DNA described in SEQ ID NO: 2 encodes a protein molecule, the function of which is to protect cells against degeneration and/or cell death,
- 73. A method of identifying an agent that affects an activity, or level, or both said activity and level, of at least one substance, said method comprising the steps of:

- a) providing a sample containing at least one substance selected from the group consisting of
- i) a DNA molecule encoding a protein molecule, wherein the amino acid sequence of the protein molecule comprises the sequence shown in SEQ ID NO:1 or a functional variant thereof,
 - ii) a transcription product of a DNA molecule encoding a protein molecule, wherein the amino acid sequence of the protein molecule comprises the sequence shown in SEQ ID NO:1 or a functional variant thereof,
 - iii) a protein molecule, wherein the amino acid sequence of the protein molecule comprises the sequence shown in SEQ ID NO:1 or a functional variant thereof,
 - iv) a DNA molecule capable of hybridizing with the complement of the DNA described in SEQ ID NO: 2 under stringent conditions,
 - v) a transcription product of a DNA molecule capable of hybridizing with the complement of the DNA described in SEQ ID NO: 2 under stringent conditions,
 - vi) a translation product of a DNA molecule capable of hybridizing with the complement of the DNA described in SEQ ID NO: 2 under stringent conditions,
 - vii) a molecule affecting a level, or an activity, or both said level and said activity, of at least one substance which is selected from the group consisting of (a) to (f),

viii) a molecule which is affected in its level, or its activity, or both its level and activity, by at least one substance which is selected from the group consisting of (a) to (f), and

- b) contacting said sample with at least one agent,
- c) comparing an activity, or level, or both said activity and level, of at least one of said substances before and after contacting..

74. A method of claim 73 wherein the function of said protein molecule or a variant thereof is to protect cells from degeneration and/or cell death.

75. A method of claim 73 wherein said DNA molecule capable of hybridizing with the complement of the DNA described in SEQ ID NO: 2 encodes a protein molecule, the function of which is to protect cells against degeneration and/or cell death.

76. A kit for diagnosis, or prognosis of a disease, said kit comprising:

- a) at least one reagent which is selected from the group consisting of reagents that selectively detect
 - i) a DNA molecule encoding a protein molecule, wherein the amino acid sequence of the protein molecule comprises the sequence shown in SEQ ID NO:1 or a functional variant thereof,
 - ii) a transcription product of a DNA molecule encoding a protein molecule, wherein the amino acid sequence of the protein molecule comprises the sequence shown in SEQ ID NO:1 or a functional variant thereof,

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- iii) a protein molecule, wherein the amino acid sequence of the protein molecule comprises the sequence shown in SEQ ID NO:1 or a functional variant thereof,
 - iv) a DNA molecule capable of hybridizing with the complement of the DNA described in SEQ ID NO: 2 under stringent conditions,
 - v) a transcription product of a DNA molecule capable of hybridizing with the complement of the DNA described in SEQ ID NO: 2 under stringent conditions,
 - vi) a translation product of a DNA molecule capable of hybridizing with the complement of the DNA described in SEQ ID NO: 2 under stringent conditions,
 - vii) a molecule affecting a level, or an activity, or both said level and said activity, of at least one substance which is selected from the group consisting of (a) to (f),
 - viii) a molecule which is affected in its level, or its activity, or both its level and activity, by at least one substance which is selected from the group consisting of (a) to (f), and
- b) instructions for diagnosing ,or prognosing said disease by
- i) detecting a level, or an activity, or both said level and said activity, of at least one substance which is selected from the group consisting of (a) to (h) in a sample from said subject; and